CORRELATION OF RASA DHATU IN MODERN PRESPECTIVE: A REVIEW
Neha Rawat 1 and Rakesh Roushan 2*
1PG Scholar, P.G. Dept. of Kriya Sharir, Ch. Brahm Prakash Ayurved Charak Sansthan, Khera Dabar, Najafgarh, New Delhi, India
2Assistant professor, P.G. Dept of Kriya Sharir, Ch. Brahm Prakash Ayurved Charak Sansthan, Khera Dabar, Najafgarh, New Delhi, India

Received on: 25/01/19 Accepted on: 20/02/19

*Corresponding author
E-mail: rakesh3151@gmail.com

DOI: 10.7897/2277-4343.100231

ABSTRACT

Rasa- the fluid of life; The quantity of rasadhatus depends upon food intake. Rasa provides fluidity to circulating raktu; it is the fluid that carries dissolved nutrients. Salts and sugar are the most important among nutrients. As a result, taking nutritional fluid is the best way to replenish rasa. The rasadhatus, being made up of the element water, has similar qualities with kapha. Rasa dhatu has qualities very similar to kapha dushta, which is made up of jala and prithvi. In the formation of the dhatus, kapha is the mala (waste product) produced during formation of rasadhatus. Some of the most common and important problems arise when a person becomes school or krish, it is due to the rasa dhatu as well. Shuulya and karksha in itself is due to many other diseases or we can say these diseases are the combination of many other diseases. The quality of the rasa dhatu is dependent upon the health of agni, or digestive fire. Food and liquid are initially digested in the gastro intestinal tract and, turned into ahara rasa. This fluid then further undergo metabolism by the rasagni to form rasa dhatu. The condition of agni determines the quality of rasa produced. When the rasagni is sluggish, the efficiency of transformation is reduced. When the rasagni is too active, it efficiently converts ahara rasa to rasa dhatu, but also burns up some of the rasa dhatu that is being produced. There is a highly variable fluid intake that must be carefully matched by equal output of water from the body to prevent body fluid volumes from increasing or decreasing. In this article we are intended to make a correlation of rasa dhatu with modern prospective to have a clearer view about the rasa dhatu. For which the basic materials have been collected from the Ayurvedic classics with the available commentaries, as well as text books of contemporary modern medical science have been referred for better understanding of the concept and its comparison with contemporary science.

Keywords: Ahara, Dhatu, Rasa, Kapha and Rasagni

INTRODUCTION

Food is composed of either panchbutas (five primary elements-prithvi, aap, tejas, yayu and akash) or of four kinds (peya-drinkables, lehya- lickables, bhojya-chewables and bhakhsha-eatables), or having six tastes (sweet, sour, salt, pungent, bitter and astringent) and two potencies (hot and cold) or eight potencies (sheeta, ushna, snigdha, ruksha, vishad, pichila, miridu and tiksha) and processing many properties, when ingested undergoes digestion in alimentary tract, after it is digested properly (by the koshтяgni- fire agency present in the pakvaamashyamadhyam) there arises its vital essence known as “Rasa” which is very subtle and suitable to move even through minute srotamsi. Hridya (heart) is its seat i.e., chief place of stay, from the heart it travels through the twenty-four dhannis (arteries), ten of them going upwards, ten going downwards and four going side wards obliquely; nourishes the entire body constantly, make it grow, supports and maintains it, by activities which are due to invisible causes1. The decreased and increase of this rasa which is travelling all over the body (constantly) has to be inferred by the sign and symptoms produced. This rasa is moving through the entire organ and organ system. According to Acharya Sushrut, total number of dhannis present in body is twenty-four and rasa also travels through all twenty-four dhannis. So, this can be concluded that rasa travels all over the body through all dhannis. Rasadhatus circulates throughout the body in many ways like the continuity of sound, flame and water. Dhalhana explains this stimulus interpreting the continuity of sound as sideward movement, that of flame as upward movement and that of water as downward movement. Shabd (sound) has maximum conduction velocity, archi has medium conduction velocity and jala has minimum conduction velocity so there is gradual reduction in velocity as the rasa moves in forward direction. In the same way rasadhatus has maximum velocity at aorta, medium in the arteries and minimum in capillaries means conduction velocity is minimum at capillaries because capillaries have maximum cross-sectional area.

The basic theory of Ayurveda is to maintain the state of equilibrium of Tridosha, Saptadhatus and Trinal. All these are nourished well initially by the influence of potency of individual Jatharagni and productive nutrients (Ahara Rasa) are passed into each level of Dhatu (bodily tissues) for nourishment. Ultimately, necessary nutrients for the formation and development of tissues are supplied by one stream of pool. They carry their support to the site, where Dhatus are located which is explained by kedarī kulya nayaya. Thus, Rasa, Rakta, Mamsa, Meda, Asthi, Majja and Shukra Dhatus develop sequentially and nourish further Dhatus (ksheer dadhi nayaya). Rasadhavagni plays an important role in the formation of Rasa Dhatu from Aahar Dhatu which further nourishes the Rakta Dhatu by the influence of Rakundhavagni. Whenever potency of any level of Dhatavagni diminishes or elevates the business of production of next Dhatu is affected. During this process Dhatumala (tissue excreta) is produced. Any Atipravritti (excessive secretion) sang (complete or partial obstruction) sirigranthi (new growth inside the srotas) or vimarg gaman (leaving its own path and entering into others path) causes Srotodasti (vitiation of srotas) may lead to abnormal formation of dhatus. In Ayurveda, some theories of tissue formation and development (Dhatu Poshana Nyaya) are elucidated in this
regard. These theories are Khale Kapota Nyaya, Ksheera Dadhi Nyaya, Kedari Kulya Nyaya and Ek Kala Dhatu Poshana Nyaya.

Table 1: Panchbhautic Content of Rasadhatu

<table>
<thead>
<tr>
<th>Panchmahabhuta</th>
<th>Related Panchbhautic Component In The Blood</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prithvi element</strong></td>
<td>Proteins- Sr. albumin, Globulin, fibrinogen, prothrombin, etc.</td>
</tr>
<tr>
<td></td>
<td>Nitrogenous- glutamine, creatine, urea, iric acid etc.</td>
</tr>
<tr>
<td></td>
<td>Sugars- glucose, glycogen etc.</td>
</tr>
<tr>
<td><strong>Apya element</strong></td>
<td>Sneca- lipids, phospholipids, cholesterol etc.</td>
</tr>
<tr>
<td>Body fluid- 60 %, All the Anions and Cations present in the body such as Sodium ion, Chloride ion, Potassium ion, Hydrogen ion etc.</td>
<td></td>
</tr>
<tr>
<td><strong>Agneya element</strong></td>
<td>Vitamin- A, D, E, K, C, B-complex, Niacin etc.</td>
</tr>
<tr>
<td>Enzymes- Amylyotic, Lipolytic, Proteolytic etc.</td>
<td></td>
</tr>
<tr>
<td>Element- Sodium Potassium, Magnesium, Calcium, Iron etc.</td>
<td></td>
</tr>
<tr>
<td>Mineral drugs- Sulphur, Phosphorus</td>
<td></td>
</tr>
<tr>
<td>All Endocrine secretions</td>
<td></td>
</tr>
<tr>
<td><strong>Vayuva element</strong></td>
<td>Gases- oxygen, carbon dioxide etc.</td>
</tr>
</tbody>
</table>

Comparison of *Rasa* functions with Modern Prospective

*Hridya* (heart) is its seat i.e., chief place to stay, from the heart it travels through the twenty-four *dharmis*, ten of them going upwards, ten going downwards and four going side wards obliquely. By travelling all along the body it provides the proper nourishment to the body and gives proper support to the body. It does the following functions i.e., it nourishes the entire body constantly (*tarpayati*), make it grow (*vardhyati*), supports (*dharyati*), and maintains the living (*japayati*). The cause of these functions is inscrutable. This process continues for all day, day and night. It provides proper nutrition and support to the body. Charaka and Sushruta have mentioned *hridya* as the root organ of *rasavaha srotas*. Sushruta has mentioned that there are total twenty-four *dharmis* present in the body which are body channels that carries *rasha* to the whole body. Therefore, *rasa* travels throughout the body and provides proper nourishment to the whole body. Due to the dominance of *jal mahabhutarasa* gains fluidity.

*Ahara* undergoes changes as soon as it enters the alimentary tract. By the action of *kedak kapha*, *saman* *vyau* and *pachak pitta*, *Pachak pitta* helps in digestion, *Saman* *vyau* resides near *pachakagni* and *koshtha*, it helps in engulfing of food and provides *bala* to *jatharagni* which helps in proper digestion of food and helps in dissociation of its *sara* (essence) and *kitta* (waste) *bhaga*. *Kledak kapha* helps in moistening of the food that enters in the alimentary canal. It helps to make bolus soft. It helps to make *amna* in *adra* form. *Ahara* *rasha* is formed from *ahara* after action of *jatharagni*. *Saman* *vyau* brings the absorbed *ahara rasha* to *hridya* thus control the venous return. *Vyaan* *vyau* ejects the *rasha* from the ventricle of the heart with appropriate pressure. The *rasadhatu* then circulates in the whole body always, continuously and simultaneously. From *hridya* with the help of *vyau* *vyau* through all *dharmisrasa* is reached to small arteries, arterioles, and capillaries and make it available to the body. Therefore, *rasa* travels throughout the body and provide proper nourishment to the whole body. Due to the dominance of *jala mahabhutarasa* gains fluidity.

Middle stage of life is *yuvwastha* and it is the most important *avastha* in one’s life. One is supposed to be as fit as fiddle in this stage because of complete development of tissues and organ in this stage. So, in this stage *dosha, dhatu* and *mala* becomes more stable. This action comes under *dharana karma* of rasadhatu. Some acharyas has referred both word *dharana* and *jeevan* as synonym. In this stage *svaroop* of *shrir* should remain in its original and proper shape which is only possible due to *rasa*.
Control of venous return by Saman vayu

Veins are thin walled structure which contains thin layers of smooth muscles in their wall. These smooth muscles are innervated by sympathetic fibres which when stimulated, increases the vasomotor tone (i.e., venous BP increases) → this leads to venoconstriction → leading to increased velocity of venous blood. Because of existence of valves in the veins (which allow only unidirectional flow of blood) → the venous blood always moves towards the heart.

Types of Rasadhatus

Chakrapanii has commented there are basically two types of rasa i.e., dwividha rasa sthahy poshakashchyata eti

1. Sthayi rasa
2. Poshak rasa

Sthahy Rasa

It is a fraction of rasa that becomes stahy and it is called stahy rasa or poshya rasa. Stahy rasa is in fact rasa dhatu. Sthahy rasa is that part of the rasa whose concentration remains stable at the end of metabolic process and its concentration is regularly monitored by poshak dhatu. In modern prospective it can be compared with plasma including its composition e.g., proteins, hormones, plasma, glucose, amino-acids, lipids etc. Function of rasadhatus is preenana provide satiety which is achieved by normal concentration of glucose molecule in the blood. Glucose concentration stimulates the satiety centre and causes loss of appetite.

Poshak Rasa

It is also known as asthivay rasa. This rasa flows all over the body through all dhahnis which has its dimensions all over the body and do its functions during circulation in cardio vascular system. Poshah rasa is circulating one. It reaches to the tissue level and provides nourishment to it. As this rasa is rich in nutrients and do nourishment i.e., poshahana, that is why it is called as poshak rasa. In modern prospective it can be compared with all molecules absorbed from gastro intestinal tract. According to chakrapani, when ahaar is digested by the action of jathargani, ahaara rasa is formed which further form the rasa dhatu after simultaneous action of both bhutagni and jathargani. Rasa absorbed from the gastro intestinal tract is vijatiya dravya and by the action of bhootagni it becomes sajatiya and converts it into sthahy dhatu; whereas, Poshaya or sthahy dhatu is nothing but the body tissues i.e., the rasa dhatu. Poshakadhatu does nourishment of poshya dhatu. Sthahy rasa, rasa dhatu and poshya dhatu are synonyms of each other. Since rasa is liquid and possess properties such as unctuoussness, enlivening, nourishing, supporting etc, it is saumya (cold in properties) in nature. Essence of food known as ahaara rasa is formed first by the action of jathargani (gastric juices in particular in the amashaya (stomach)) and is a partially digested product. It passes through the grahni (duodenum) gets mixed with acchaprada (bile and pancreatic juice) reaches the pachayamashaya (small intestine). There it undergoes further digestion by the action of bhutagni (metabolic process). After these activities are complete, the first dhatu, rasa dhatu is formed with the help of rasagni. This is white thin liquid containing nutrient materials essential for the formation and growth of other dhatus. This rasa dhatu travels all over the body constantly supplying nutrient materials (dhatu poshak (poshak dhatu or asthivay dhatu) to other static tissues (stahy or poshya dhatu)). Portal vein drains absorbed ahaar rasa from the small intestine to liver and from there reaches the heart by inferior vena cava. When a little quantity of blood is taken out, kept in a glass test tube, and prevented from clotting, after few minutes, we see two distinct portions separately, a thin watery liquid white portion, more in volume at the top and thick, red slimy portion at the bottom. The fluid portion at the top is called plasma and is equivalent to rasa dhatu, the thick red slimy portion at the bottom comprises of blood corpuscles- red and white and also platelets, this is equivalent to raktu dhatu. Both the portions remain together always and circulate throughout the body constantly (rasa raktha shacharya and rasa-rakta samvahana).

From rasa dhatu, rakta gets formed then from rakta, mansma gets formed, from mansma, mea is formed, from mea, asthi is formed, from asthi, majja is formed and from majja, shukra gets formed. For all these dhatus, the essence of food (ahaar rasa) is the supplier of nutrients. Ahaara rasa is the main source of nutrition to the tissues. It contains nutritive materials (poshaka ansha) essential for all dhatus and during its circulation throughout the body, every dhatu draws its own specific nutrient required for formation of dhatu. Such nutrient materials are utilized by the dhatvagni and made use of for its own growth. Aahar rasa can also be compared with chyme. As After food in the stomach has become thoroughly mixed with the stomach secretions, the resulting mixture that passes down the gut is called chyme. Chyme basically contains all the nutrients which further break down to provide nourishment to the body. In the same way rasa dhatu has all the important nutrients in it and provides nourishment to other dhatus.

The formed rasa is called tejohbhuata, it appears as ghrita. Every dhatu has its own agni called as dhatvagni which is specific to the dhatu in which it is present designated by the name of the dhatu (itself) viz. rasagni, raktagni, etc. this agni metabolise the poshak ansha (nutrient materials) supplied by the circulating rasa. After this kind of metabolism three kind of materials get formed viz-

1. Sthula bhaga
2. Sukhahma bhaga
3. Mala bhaga

Sthula bhaga is major product meant for the maintenance and growth of the same dhatu. The sthula bhaga are dhatu which gets formed after the formation of former dhatu. Sukhshma bhaga is little in quantity has precursor for genesis of next dhatu. All the factors which are responsible for the formation of other dhatu is called sukshma bhaga. Like vitamin B12, folic acid, iron, erythropoietin etc which are responsible for the formation of rakta dhatu comes under sukshma bhaga. Mala bhaga represents the waste products of that tissue. All the waste products of the body come in mala bhaga. Our body has a way of getting rid of excess materials, whether food matter, oxygen, carbon dioxide, water, salt or waste. Human body has 60 percent of fluid. In our body the excretory system helps to keep salts and urea from building up to dangerous level and becoming toxic. Most of the waste substances that are not needed by the body, especially the metabolic end products such as urea, are reabsorbed poorly and passes through the renal tubules into the urine. So, mala travels with blood in the body and reach to kidneys for the excretion. Another mala bhaga is carbon dioxide. Carbon dioxide is the most abundant waste of all the ends product of metabolism. Carbon dioxide is absorbed in the blood and carried to the lungs and is removed by the lung during process of expiration. In this manner dhatus gets formed in succeeding order, purva dhatu give rise to uttar dhatu by supplying its sukshma bhaga so commencing with the first dhatu – the rasa dhatu, the second dhatu rakta dhatu is formed. From rakta, mansma dhatu is formed and so on till the seventh and last dhatu shukra is formed.
Diseases from Rasa vikrati

Rasa is responsible for sthaulya and karshya in the body. Persons indulging in shleshma promoting diets, those who eat before the previous meal has been digested, those who do not do any physical exercise and habitual diurnal sleepers, in all of them the nutrient fluid circulating in the body in a stage of partial metabolism remains consume and is converted into medas due to its nutrient fluid being a fat promoter and this process thus make them obese; the very obese readily from dyspnnea on effort, thirst, polyphagia, too much of sleep, excessive perspiration, bad odour from the body, snoring, a sense of depression in the body and blurred speech. On account of softness of adipose tissue, the obese are incapable of doing all physical activities. The channels are being obstructed by kapha and medas. They remain weak because of other dhatus obtaining less nourishment due to the obstruction of the passage. The obese may die due to any of the complications such as boils associated with urine abnormalities, pyrexia, fistula in-ano, abscess and other vataka disorders. All diseases occurring in them i.e., obesity assume seriousness due to the obstruction in metabolic pathways. Therefore, one should avoid all the etiological factors which lead to obesity. In all those who indulge in vata promoting diet, excessive physical exercise, excessive sexual intercourse, sternous study, fear, grief, anxiety, wakefulness in the night, thirst, hunger, anger, taking of astringents, partial starvation, etc, circulating rasa being reduced in quantity fails to nourish the tissues due to insufficient, hence extreme emaciation or karshya occurs. The emaciated persons are intolerant to hunger, thirst, cold, hot air and rains are unable to carry weights. They also suffer from nervous diseases frequently and are weak in activities. They may die from any of the complications such as asthma, cough, consumption, splenomegaly, hypo activity of digestive mechanisms abdominal gaseous tumours and haemorrhagic diseases. All diseases occur with greater severity in them due to general weakness, they should avoid all the etiological factors which lead to emaciation.

Functions of Rasadhatu in the Body

Rasadhatu provides satisfaction, nutrition and supplies nourishment to the rakta dhatu. As we discussed earlier that heart is the seat of rasadhatu. Rasa travels throughout the body with the help of all dhannis i.e., 24 dhannis which comes out from heart. So, in case of rasa kshaya it causes chest pain, palpitation, sense of emptiness and thirst. If it becomes excess it produces oppression in the heart and increased nausea and salivation may occur. According to acharya sushruta rasadhatu provides satisfaction and if any person does not meet up their satisfactory need they feel dejection and ends up in depression that is all due to rasa. Acharya chakrapani opines that as the milk gets completely transformed into curd by the action of certain bacteria and microbes, curd into butter and butter into ghee in the particular order. In the same way rasadhatu gets completely transformed into raktaka by the help of rasagni; then raktaka to mansa, mansa to meda, meda to asthi, asthi to majja and majja to shukra. Due to this complete transformation of rasa to shukra, it is called sarvaatman parinam paksha and because the chakrapani quoted the example of ksheer and dadhi and known as ksheer dadhi nyaya. It is also important to note that conversion of aahar rasa to rasa dhatu occur in one day; whereas, rasa to raktaka transformation occur in 3015 kala i.e. about 5 days. Therefore, if a person does not consume aahar for more than 6 days that person will start developing dhatukshaya. As we can compare it in modern prospective that completes conversion of mesenchymal tissue into bone by the process of ossification. This ossification process is one of the examples of ksheer dadhi nyaya. The conversion of 25 hydroxy vitamin D₃ to 1, 25 dihydroxy vitamin D₃ is also one of the examples of sarvatam parinam paksha. Next is kedari kulya nyaya. The word Kedar means small pieces of land and Kulya means drain. Crops in the field get irrigated by creating Kulya and Kedar. The Kedar (small pieces of land) get irrigated by one out through Kulya (drain) in sequence. Likewise, different Dhatus of the body get nutrition one by one in sequence through vessels. Firstly, Rasa Dhatu gets nutrition from Ahara Rasa. Then Rakta Dhatu get nutrition from the rest part of Ahara Rasa and likewise till the end i.e. Shukra Dhatu. In this context the kedari is compared with dhatus and kulya is compared to the body channels which carry fluids and nutrients to the target organ. In the harvesting field as the water reach nearby fields before than the far away fields same happens in case of dhatuposhan. According to this nyaya, rasadhatu carry rakta poshak ansh and reach to the rakadhatu and provides nourishment for the further formation of the rakta dhatu. Same way rasa reaches the mansadhatu and provides nourishment to the mansa dhatu. And so on. It is only which moves to and reach the dhatu and helps in formation of dhatus. Charak rasadratram, sushruta khalvapaya rasa and harita saptahadaravaka supports this nyaya. According to modern physiology passive diffusion comes in kedari kulya nyaya. Selective absorption takes place. One of the best examples is exchange of gases in respiratory system because of pressure gradient.

Ayurvedic law of nutrition of dhatu is transformed as follows:

When the digestion starts first aahar rasa reaches the Rasavaha Shrotas and rasadhatvagni processed the Ahara Rasa. In this process it is divided into three parts Shhoola bhaga which is macroscopic in nature, sookshma bhaga which is microscopic and Malabhaga the excretory part. Among them the shhoola part gives nourishment to its very own dhatu i.e., Rasa dhatu whereas sukhsma part nourish the descent dhatu which is rakta dhatu and mala nourishes its mala that is kapha in rasa dhatu. The next is khale kapot nyaya. The word khale means pot and kapota means pigeon, the bird. The pigeon has to come to the pot of grain to relax their thirst, likewise the nearest Dhatus are directly nourished by Aahar Rasa without considering the sequence of nutrition.

Absorption of Aahar rasa

After the intake of aahara, it moves towards the kostha by the help of prana vayu. The site of pachakagni is grahami or pakvamashaya better known as pitadhara kala. Samana vayu which is present in the vicinity of agni stimulate the pachakagni for the digestion and separation of food as well as shoshyati i.e., absorption of water and nutrients. This absorption of nutrient and water requires movement which is the main function of vata. So here both samana vata and pachakagi is responsible for absorption. Absorption from small intestine each day consists of several hundred grams of carbohydrate, 100 or more gram of fats, 50-100 gram of amino acids, 50-100 gram of ions, and 7-8 lit of water. In small intestine sodium absorption is powered by active transport of sodium from inside the epithelial cells. This active transport requires energy. Part of sodium ion is absorbed along with chloride ion. The negatively charged chloride ions are passively dragged by the positive electric charge of sodium ions. Sodium is also co transported by specific carrier proteins including sodium glucose co-transporter, sodium amino acid co-transporter and sodium hydrogen exchanger. The next step is the osmosis of water. This osmosis occurs because a large osmotic gradient has been created by the elevation of concentration of ions. This process in small intestine need energy which is nearly similar to khalekapota nyaya in which the pigeons have to spend energy to procure the
grain and this process is active one. Two types of paka occur in process of digestion namely avastha paka and nishta paka. Avasthapaka is of three types i.e., madhuraavastha paka, amla avastha paka, katu avastha paka. In the process of katu avastha paka (soshyamana vanhina) jatharagni helps in absorption of water. Most of the water present in the chyme is absorbed in the colon. This process may be similar to kedarikulya nyaya. It does not require energy. This theory can explain the passive diffusion where different field receive water through different channel without expenditure of energy.

DISCUSSION

Dosha, dhatu and mala are the root of life “Dosha dhatu mala mulam hi shariram”1. These are the biological forces which work through the medium of dhatus and malas. Dhatus and malas are the structural units and the doshas are not. Hence the doshas are called as asrayees and dhatus called as asrayaas Dosha. Rasa 60-65 % of water and 35-40 % solids. Rasa is the primary important dhatu in the body which helps in the formation of other dhatus of the body. It circulates into the body whole time and keeps the entire body functioning constantly. Acharyas described that the disease which are caused by the dusti of rasa are either due to vriddhii (increase in quantity) or due to kshaya (decrease in quantity). Thus, rasa is the main dhatu in the body which produce directly from anna rasa and it is one of the vital tissues for the nourishment of body. Do, all fluid present in the body is rasayukta and this is main factor for the Vardhan, dharna, tarpan and yapanakarma in the human body.

CONCLUSION

Rasadhatu which is called the fluid of life is made up of Ahara rasa. Fluidity is present in it because of predominance of jala mahabhuta and it can travel in param sukshma srotas of the body. It is basically of two types' sthayi rasa and poshak rasa. Poshak rasa is the circulating one and carry the nutrients for the nourishment of sthayi or static dhatu. Sthayi dhatu is rasadhatus only or we can say sthayi dhatu, rasa dhatu and poshya dhatu all are synonyms. Composition of rasa dhatu is the deciding factor for sthulya and karshya in the body. Rasa dhatu provides core nutrition for the further dhatus. Rasa dhatu is compared with plasma and it has three major components solids, water and gases. Solids are 7-8 % and contains organic substances like plasma proteins, carbohydrate, enzymes, non protein nitrogenous substances, amino acids, internal secretions like hormones and antibodies whereas inorganic substances include sodium, calcium, potassium, magnesium, bicarbonate, chloride, phosphate, iodide, iron and copper. Water is 92-93 % and gases include oxygen, carbon dioxide and nitrogen. Rasavaha srotas dushti can cause many diseases in the human body so it is the necessity to maintain the proper quantity and quality of rasa in the human body. So, it is important to have a balanced diet, so balanced ahara rasa will formed and hence the balanced formation of rasa dhatu will takes place in the sharir.

REFERENCES


Cite this article as:


Source of support: Nil, Conflict of interest: None Declared

Disclaimer: IJRAP is solely owned by Moksha Publishing House - A non-profit publishing house, dedicated to publish quality research, while every effort has been taken to verify the accuracy of the content published in our journal. IJRAP cannot accept any responsibility or liability for the content and articles published. The views expressed in articles by our contributing authors are not necessarily those of IJRAP editor or editorial board members.